

REMARKS

I. STATUS OF THE APPLICATION

This paper is filed responsive to the final Office Action mailed January 23, 2009. Claims 1, 2 and 12-15 are pending in the application.

II. THE REJECTION UNDER 35 U.S.C. § 103

Claims 1, 2, and 12-15 remain rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,716,203 ("Casey et al."). In particular, the final Office Action asserts:

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to disclose a diblock polymer comprising a linear, hydrophilic polymer block A and a polymer block B comprising at least two different monomers, as taught by Casey [et al.]. One of ordinary skill in the art at the time the invention was made would have been motivated to make such a composition because it is useful hydrogels for pharmaceutical compositions, as explained by Casey[et al.].

Applicants respectfully traverse the rejection.

As explained in the response filed on October 28, 2008 Casey et al. does not disclose or suggest the claimed invention. The claimed invention is directed to diblock copolymers of formula A-B wherein:

polymer block A represents a linear pharmaceutically acceptable hydrophilic polymer with a **molecular weight <1,000**, and

polymer block B represents a polymer comprising at least two different monomers selected from glycolic acid, propiolactone, γ -butyrolactone, δ -valerolactone, γ -valerolactone, ϵ -caprolactone, trimethylene carbonate, p-dioxanone, tetramethylene carbonate, ϵ -lactone, 1,5-dioxepan-2-one **wherein the diblock copolymer is liquid at a temperature below 50°C.**

Casey et al. discloses diblock copolymers having a first block of a polyalkylene oxide and a second block of glycolic acid ester and trimethylene carbonate linkages. See Abstract. Casey et al. does not disclose or suggest that the first block polymer has a molecular weight <1,000 as claimed. In fact, Casey et al. teach away from the claimed molecular weight by disclosing that "[i]n another embodiment, the number average molecular weight of the polyalkylene oxide block is from about 4,000 to 30,000." (see col. 1, lines 47-50). Further, the only example of a diblock copolymer in Casey et al. regards use of PEG having a molecular weight of 5,000. The present specification, on the other hand, discloses that the claimed molecular weight, i.e.,

<1,000, is preferred. See, e.g., paragraph [0051] of the published application. The present specification also discloses that “[s]ince the polymers of the present invention are characterized by being liquid below 50° C., polymers with a limited molecular weight are preferred.”

Casey et al. also does not disclose that the diblock copolymer is liquid at a temperature below 50 °C. Rather, Casey et al. discloses that “[t]he inherent viscosity of the copolymer, as measured at 30° C. for a 0.5% (w/v) solution in chloroform or methylene chloride, is 0.25 to about 1.50 dL/g” (see col. 2, lines 21-26). “Inherent viscosity” is defined as “the ratio of the natural logarithm of the relative viscosity to the concentration of the polymer in grams per 100 ml of solvent” (see ask.com). “Inherent viscosity” is also defined as:

Inherent Viscosity (IV) is a viscometric method for measuring molecular size. IV is based on the flow time of a polymer solution through a narrow capillary relative to the flow time of the pure solvent through the capillary. The units of IV are typically reported in deciliters per gram (dL/g). IV is simple and inexpensive to obtain and reproducible between different laboratories.

See <http://www.absorbables.com/inherentviscosity.htm>. As stated in Casey et al., the inherent viscosity is measured when the polymer is in chloroform or methylene chloride, each a solvent in which the polymer is capable of dissolving. This does not mean that the polymer itself is liquid. As further evidence of this is the fact that the only example of a diblock copolymer in Casey et al. regards a composition having a melting temperature of 59° C (see col. 14, lines 52-59). Reconsideration and withdrawal of the rejection of claims 1, 2 and 12-15 under 35 U.S.C. § 103 over Casey et al. are respectfully requested.

III. CONCLUSION

Early consideration and prompt allowance of the claims are respectfully requested. Should the Office require anything further, it is invited to contact Applicants’ representative at the telephone number below.

Respectfully submitted,

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